

Title (en)

MULTI-SPLIT AIR CONDITIONING SYSTEM, AND REFRIGERANT FLOW CONTROL METHOD THEREFOR

Title (de)

MULTI-SPLIT-KLIMAANLAGE UND VERFAHREN ZUR REGELUNG DES KÜHLMITTELSTROMS DAFÜR

Title (fr)

SYSTÈME DE CLIMATISATION À UNITÉS MULTIPLES, ET PROCÉDÉ DE RÉGULATION D'ÉCOULEMENT DE FLUIDE FRIGORIGÈNE ASSOCIÉ

Publication

EP 4141339 A4 20231025 (EN)

Application

EP 21792867 A 20210205

Priority

- CN 202010323064 A 20200422
- CN 2021075562 W 20210205

Abstract (en)

[origin: EP4141339A1] Disclosed is a refrigerant flow control method for a multi-split air conditioning system, the method comprising: when a multi-split air conditioning system is started and operates in a heating mode, acquiring a refrigerant outlet side temperature of an indoor heat exchanger (EH_{i1}) of an indoor unit which is in a normal heating state, and a refrigerant outlet side temperature of an indoor heat exchanger (EH_{i2}) of an indoor unit which is in a standby/shutdown state; comparing the refrigerant outlet side temperature of the indoor heat exchanger (EH_{i1}) of the indoor unit in the normal heating state with the refrigerant outlet side temperature of the indoor heat exchanger (EH_{i2}) of the indoor unit in the standby/shutdown state; and selectively increasing or reducing the opening degree of a bypass expansion valve (XV_{i2}) of the indoor unit in the standby/shutdown state according to a comparison result. Further disclosed is a multi-split air conditioning system. The problems whereby when the multi-split air conditioning system is started and operates in a heating mode, the amount of refrigerant in an indoor unit in a normal heating state is insufficient, and the amount of noise of an indoor unit in the standby/shutdown state is large can be solved.

IPC 8 full level

F24F 11/64 (2018.01); **F24F 11/63** (2018.01); **F24F 11/67** (2018.01); **F24F 11/84** (2018.01); **F24F 11/86** (2018.01); **F24F 11/89** (2018.01); **F24F 13/24** (2006.01); **F24F 110/10** (2018.01); **F24F 140/20** (2018.01)

CPC (source: CN EP)

F24F 11/61 (2017.12 - CN); **F24F 11/63** (2017.12 - EP); **F24F 11/64** (2017.12 - CN); **F24F 11/67** (2017.12 - EP); **F24F 11/84** (2017.12 - CN EP); **F24F 11/86** (2017.12 - EP); **F24F 13/24** (2013.01 - CN); **F24F 3/065** (2013.01 - CN); **F24F 2013/247** (2013.01 - CN EP); **F24F 2110/10** (2017.12 - CN EP); **F24F 2140/20** (2017.12 - CN EP); **Y02B 30/70** (2013.01 - EP)

Citation (search report)

- [I] CN 102032648 A 20110427 - HISENSE SHANDONG AIRCO CO LTD
- [A] CN 110500702 A 20191126 - HISENSE SHANDONG AIRCO CO LTD
- [A] WO 2019104965 A1 20190606 - QINGDAO HAIER AIR CONDITIONING ELECTRONIC CO LTD [CN]
- See references of WO 2021212966A1

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)

EP 4141339 A1 20230301; **EP 4141339 A4 20231025**; CN 113531856 A 20211022; WO 2021212966 A1 20211028

DOCDB simple family (application)

EP 21792867 A 20210205; CN 202010323064 A 20200422; CN 2021075562 W 20210205